

**MICROSTRIP-TO-WAVEGUIDE POWER COMBINER
FOR RADIO FREQUENCY POWER COMBINING**

Abstract of the Disclosure

A microstrip-to-waveguide power combiner includes a dielectric substrate and at least two microstrip transmission lines formed thereon in which 5 radio frequency signals are transmitted. The microstrip transmission lines terminate in microstrip launchers or probes at a microstrip-to-waveguide transition. A waveguide opening is positioned at the transition. A waveguide back-short is positioned 10 opposite the waveguide opening at the transition. Isolation vias are formed within the dielectric substrate and around the transition and isolate the transition. A coaxial-to-waveguide power combiner is also disclosed.